

Alan F. Ciamporcero
Senior Counsel

1275 Pennsylvania Avenue, N.W.
Suite 400
Washington, DC 20004
(202) 383-6416

PACIFIC  TELESIS
Group

DOCKET FILE COPY ORIGINAL

RECEIVED

JUN 15 1994

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

June 15, 1994

William F. Caton
Acting Secretary
Federal Communications Commission
Mail Stop 1170
1919 M Street, N.W., Room 222
Washington, D.C. 20554

Dear Mr. Caton:

Re: *CC Docket No. ET Docket No. 94-32, Allocation of Spectrum Below 5 GHz
Transferred from Federal Government Use*

On behalf of Pacific Bell and Nevada Bell, please find enclosed an original and six copies of their "Comments" in the above proceeding.

Please stamp and return the provided copy to confirm your receipt. Please contact me should you have any questions or require additional information concerning this matter.

Sincerely,



Enclosures

No. of Copies rec'd 045
List A B C D E

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

RECEIVED

JUN 15 1994

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of)
)
Allocation of Spectrum Below) ET Docket No. 94-32
5 GHz Transferred from)
Federal Government Use)

COMMENTS OF PACIFIC BELL AND NEVADA BELL

The Commission has requested comment concerning potential applications for 50 megahertz of spectrum that is being transferred immediately from the Federal Government to private sector use. Due to the restricted size of the spectrum being transferred, timing problems and constraints related to applicable access technologies, the Commission's proposed plan has limited practical applications. If these issues are addressed, the spectrum may be conducive to more commercial uses than those mentioned herein.

The 50 megahertz of spectrum being transferred are at the bands 2390-2400 MHz, 2402-2417 MHz and 4660-4685 MHz. The amount of spectrum, in conjunction with its location, constrains its uses. These factors will also be an issue with the other bands identified for reallocation in the National Telecommunications and Information Administration

(NTIA) Preliminary Plan.¹ The 1390-1400 and 1427-1432 bands are small and unbalanced (i.e., five and ten MHz bands) and may not be capable of providing a commercially viable service. The five MHz in the larger of the two bands would lie fallow or might be used for a service that does not require pairing of frequencies to operate. Some stationary outdoor or in-building services may be conducive to a Time Division Duplex (TDD) service in this band. Most mobile wireless services will require Frequency Division Duplexing (FDD) which is founded on the ability to balance the frequencies used for both directions of the service. For example, PCS service will necessitate the pairing of frequencies with one group of frequencies being utilized from the base stations to the portables and the paired set going from the portables to the base stations. These services will need to be balanced and separated by a reasonable amount of spectrum for them to operate properly without restricting radio system design. When pairing of frequencies is not available, many commercial applications will not be possible in that frequency band.

¹ See In the Matter of Allocation of Spectrum Below 5 GHz Transferred from Federal Government Use, ET Dkt 94-32, Notice of Inquiry, FCC 94-97 (released May 4, 1994), Appendix A (hereinafter referred to as the "NOI").

Another example of the difficulty with the NTIA's planned bands from a pairing perspective is the 1670-1675 and 1710-1755 bands. These bands can only be paired for five MHz because there is an imbalance in the up and down links. The remainder of the 1710-1755 band may thus also lie fallow or only be available for services that are compatible with the TDD technique mentioned above.

Finally, the 2300-2310 and 2390-2400 bands can be easily paired because they are balanced and there is sufficient separation between the bands; however, the former is scheduled for reallocation in January 1996 and the latter is scheduled for immediate transfer. The balance, separation and capacity of these bands are appropriate to commercial applications including PCS growth or public safety services. The differential in timing availability, however, will delay these applications.

These problems combine to make the proposed transfer of spectrum of limited practical use. The difficulties in pairing the frequencies, and the timing and size of certain blocks to the private sector bound the potential use for the spectrum dramatically. To address these issues, the Commission should reconsider the timing of allocations and review other portions of NTIA spectrum for frequency paired applications.

The Commission requests answers to specific inquiries.² Pacific Bell and Nevada Bell hereby respond to questions (a), (e), (f) and (h).

- (a) Does the spectrum identified for immediate reallocation have potential for promoting economic growth and competition and enhancing access to services when used in the private sector and, if not, why? What would be the most appropriate non-Federal uses of these bands? Commenters should describe services envisioned for these bands, including appropriate standards and operating rules. (Footnote omitted.)

There are limited applications available through the spectrum designated for immediate reallocation. The 2390-2400 and 2402-2417 bands are spaced too close together to be paired. Without sufficient separation, these bands are only viable for those who plan to employ TDD techniques. Moreover, if the two MHz gap between the two bands is retained, there could be technical difficulties and system complexities. For example, guard bands or special filters would need to be used to avoid interference which would increase the complexity of the radio. With TDD, these bands could be used for in-building voice and data as well as other limited outdoor applications such as public access to the public switched telephone network, including wireless coin phones.

² NOI, at para. 9.

The remaining band slated for immediate reallocation is 4660-4685. It is too close to the 4635-4660 band (scheduled for reallocation in January 1997) to be easily paired. These bands would therefore have to be used as a contiguous block. Again, in-building, TDD applications, starting in the upper band would be possible with growth allowed in the lower band when it is released. Limited outdoor applications may also be feasible.

- (e) Will non-Federal users be able to effectively use the 2402-2417 MHz band, considering its allocation for use by ISM equipment, and especially considering that a large number of microwave ovens operate in this band? Further, what will be the impact upon use of this band by Part 15 devices? What effect will existing services have on the potential for competition and access to new services? What effect will new services have on competition and access to existing services?

Microwave ovens and other Part 15 applications are known to scatter beyond their assigned 2450 frequency and may present interference problems, possibly in the 2402-2417 MHz frequency band. Interference concerns severely limit the feasibility of new commercial services in this band.

- (f) The Reconciliation Act has reaffirmed the on-going responsibility of the Commission to consider the spectrum and interoperability needs of the public safety community when making spectrum allocation decisions. (Footnote omitted.) We request comment on the utility for public safety communications systems of the spectrum identified for immediate reallocation, including comment on the degree to which the proposed spectrum could help increase the ability of all public safety workers to communicate with each other.

There are limited paired services available with the Reallocation Plan which may in turn, limit the technology choices for public safety applications. The 2300-2310 and 2390-2400 MHz bands could be paired for public safety communications if they were made available for reallocation at the same time.

- (h) We note that the preliminary report identifies additional spectrum in close proximity to these bands that would become available later. Specifically, the 2300-2310 MHz band, which could be paired with 2390-2400 MHz, is slated to become available in 2 years and the 4635-4660 MHz band, which could be combined with 4660-4685 MHz, is slated to become available in 3 years. We request comment on whether it would be advantageous to delay licensing some of the 50 megahertz of immediately available spectrum so that in a few years larger blocks of spectrum could be made available?

It would be appropriate to delay the 2390-2400 MHz band until January 1996 to coincide with the 2300-2310 MHz band. However, delaying the 4660-4685 MHz band to coincide with the 4635-4660 MHz band may not be justifiable because the lack of spacing between the two bands would render them unsatisfactory for FDD applications and would limit the technology choices for services to the TDD technique only.

Conclusion

As discussed herein, the proposed plan for reallocation has technical difficulties associated with unbalanced amounts of spectrum between blocks, lack of

pairing opportunities with the blocks made available,
inadequate separation between blocks, and concerns with the
timing of the release of certain blocks. If the Commission
is able to address these concerns now, there may be
additional commercial applications for the spectrum to be
reallocated which will meet the Commission's goals of
introducing new services and enhancing existing services.

Respectfully submitted,

PACIFIC BELL AND NEVADA BELL

Theresa L. Cabral

JAMES P. TUTHILL
THERESA L. CABRAL

140 New Montgomery St., Rm. 1529
San Francisco, California 94105
(415) 542-7664

JAMES L. WURTZ

1275 Pennsylvania Avenue, N.W.
Washington, D.C. 20004
(202) 383-6472

Their Attorneys

Date: June 15, 1994